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EXAMINER	
CAMPBELL, KELLIE L	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,185	WAGNER, CHRISTINA MARIA	
	Examiner	Art Unit	
	KELLIE CAMPBELL	3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07 December 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a first, non-final Office Action on the merits in response to the application filed on October 28, 2008. **Claims 1-21 are pending and have been examined.**

Priority

2. Applicant claims priority to U.S. Provisional Application 60/392, 391filed on June 28, 2002. Applicant's claim for the benefit of the prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is hereby acknowledged.

Information Disclosure Statement

3. The information disclosure statement (IDS) was submitted on December 7, 2009. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement was considered by the examiner and a copy for form 1449 is enclosed herewith.

Claim Objections

4. Claims 2 and 12 are objected to because of the following informalities: missing period at the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7. **As per Claim 1**, it is directed to a method comprising the steps of "generating" and "communicating". In order for a process to be considered statutory under 35 U.S.C. §101, the claimed process must satisfy the "**machine or transformation test**"; that is the process must either: (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing. In re Bilski, 545 F. 3d 943, 88USPQ2d 1385 (Fed. Cir. 2008). When neither of these requirements is met by the claim, the method is not a patent eligible process under 35 U.S.C. §101 and is non-statutory subject matter. The method steps of Claim 11 are not tied to a machine or apparatus and do not involve transforming an article into a different state or thing and only make a nominal recitation of a computer (i.e. computer-implemented method). Thus, Applicant's claim is not drawn to patent-eligible subject matter because it fails the **"machine or transformation test"**. Therefore, Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. **As per Claims 2-10**, they each depend either directly or indirectly on Claim 1 and do not cure the deficiencies set forth above. Therefore, Claims 2-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. **As per Claims 2 and 12**, they each recite "enhanced reproductive rate". This recitation is vague and indefinite because it is unclear what range Applicant intends the recitation to cover. Applicant's specification states the following in paragraph 12 of the specification: *the term "enhanced reproductive rate" shall mean and refer to a reproductive rate for a particular animal involved in the genetics transfer function, either as a live animal or as a semen or oocyte or embryo donor that is 3 to 30 times the inherent reproductive rate for that animal, more preferably 6 or 8 to 30 times the inherent reproductive rate for that animal.* Does Applicants intend the "enhanced reproductive rate" to cover 3 to 30 times the inherent reproductive rate for the animal? Does Applicants intend the "enhanced reproductive rate" to cover 6 to 30 times the inherent reproductive rate for the animal? Does Applicants intend the "enhanced reproductive rate" to cover 8 to 30 times the inherent reproductive rate for the animal? Also, how is the rate measured, per liter or over the lifetime of the animal? Clarification is required. For purposes of examination, Examiner will interpret the enhanced reproductive rate to mean 3 to 30 times the enhanced reproductive rate of an animal.

10. **As per Claims 5 and 15**, they each recite a "first" and "second" "fee" for the "genetics transfer embodiment" and in one instance that the fee varies and in another instance that the fee is the same for all genetics transfer embodiments. This recitation

is vague and indefinite because it is not clear how a fee for the genetics transfer embodiment can be the same for all embodiments and also different depending on the embodiment. Clarification is required. For purposes of examination, Examiner will interpret the recitation to mean merely a fee (i.e. any fee).

11. **As per Claims 6 and 16**, they each recite "having greater than a preselected level of genetics derived from the genetics transfer embodiment". This recitation is vague and indefinite because it is unclear what Applicant intends "derived from" to cover. By "preselected level of genetics derived from" does Applicant mean the level of pigs per litter with superior qualities? By "genetics derived from" does Applicant mean

12. **As per Claim 8**, it recites the number of weaned pigs having 25% or more genetics derived from the genetics transfer embodiment. This recitation is vague and indefinite because it is unclear what applicant intends by "25% or more genetics derived from the genetics transfer embodiment". Does Applicant intend the genetics to be measured from

13. **As per Claim 20**, it recites "the method of Claim 11 wherein the System". This recitation is vague and indefinite because it is unclear whether Applicant intends to claim a method or a system. That is, the claim recites a mixture of statutory classes. Clarification is required. For purposes of examination, Examiner will interpret the claim to refer to a system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. **Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allan P. Schinckel; Gary Bennett, Swine Genetics, Fact Sheet No. 1, The Economic Impact of Genetic Improvement, September 1999 (hereinafter Economic Impact) in view of U.S. Patent Application Publication 2005/0221322 A1 to Fox (hereinafter Fox).**

15. **As per Claim 1**, *Economic Impact* discloses a method for conducting business in which a swine genetics supplier makes swine genetics available to a swine genetics customer in form of a swine genetics transfer embodiment (page 1, column 1, paragraph 4, Pork producers must exploit the power of genetic improvement programs in order to improve their production efficiency; page 2, column 1, paragraph 1, Commercial producers who obtain all their breeding stock from seedstock suppliers can genetically improve their herds) the method comprising:

a. generating a fee for use of swine genetics (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder) an input representative of a usage event representative

of a swine genetics customer's use of the swine genetics transfer embodiment (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder)), and

b. communicating the charge to the swine genetics customer page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder).

Economic Impact does not expressly disclose using a data processing system and a datalink for performing the method.

However, Fox teaches a swine breeding method for genetic improvement (¶1, The invention relates to the production of swine and in particular aspects to methods and systems using two or more nucleus herds for breeding and delivery of improved genetics with health to swine producers.; ¶66, The present invention is primarily described herein in terms of "the system" and its associated subsystems (e.g., sorting system, genetics improvement system, etc.) that uses a processor and a datalink to track the usage of the breeding stock (¶47, For example, phenotypic data relevant to selected traits from at least one of SGN1 and SGN2 can be provided by a data link to a

database that is data linked to a data processor for producing the measures of estimated breeding values, and then the data processor is used to access the database to produce the measures of estimated breeding values or of rate of genetic improvement).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Economic Impact with the teachings of Fox to include using a data processing system and a datalink.

A person having ordinary skill in the art at the time the invention was made would have been motivated to do so in order to save time and reduce cost associated with manually doing business.

16. **As per Claim 2**, *Economic Impact* discloses the method of claim 1 wherein the swine genetics transfer embodiment comprises an enhanced reproductive rate genetics transfer embodiment (page 1, column 3, paragraph 2, The mating of a E1 female to a sire of different breeding, for example, is expected to improve litter size about 8%; page 2, column 1, paragraph 1, boars).

17. **As per Claim 3**, *Economic Impact* the method of claim 1 wherein the genetics transfer embodiment comprises a genetics transfer embodiment selected from the group consisting of semen, low-dose semen, oocytes, embryos harvested from donor sows, embryos prepared by in vitro fertilization, boars, gilts, and sows and combinations of any two or more thereof (page 1, column 3, paragraph 2, The mating of a E1 female to a sire of different breeding, for example, is expected to improve litter size about 8%; page 2, column 1, paragraph 1, boars; see table 3 and related text, replacement gilts).

18. **As per Claim 4**, *Economic Impact* does not expressly disclose the method of claim 1 wherein the method comprises:

a. generating a first fee for use of swine genetics (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder) by use of a data processing system receiving by datalink an input representative of a genetics transfer embodiment being made available to a customer;

b. generating a second fee for use of swine genetics by use of a data processing system receiving by datalink an input representative of a usage event representative of a swine genetics customer's use of the swine genetics transfer embodiment (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected

from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).); and

c. communicating the first fee and the second fee to the swine genetics customer (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder).

19. **As per Claim 5**, *Economic Impact* discloses the method of claim 1 wherein the method comprises:

a. tracking a plurality of genetics transfer embodiments made available to a customer (see table 3 and related text, see table 4 and related text) and;

b. Generating the first fee for each of the genetics transfer embodiments responsive to an input representative of the genetics transfer embodiment being made available to a customer (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their

herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.);

c. Wherein the first fee for each of a plurality of genetics transfer embodiments is selected from a plurality of fees according to the genetics transfer embodiment being made available (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.); and

d. Wherein the second fee for each of the plurality of genetics transfer embodiments comprises the same fee for each of the plurality of genetics transfer embodiments (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.).

20. **As per Claim 6**, *Economic Impact* discloses the method of claim 1 wherein the usage event is a number of swine produced using the genetics transfer embodiment and having greater than a preselected level of genetics derived from the genetics embodiment (page 2, column 3, paragraph 1, The relative effects of selection of

replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).).

21. **As per Claim 7**, *Economic Impact* discloses the method of claim 1 wherein the usage event is a number of swine produced using the genetics transfer embodiment having greater than a preselected level of genetics derived from the genetics embodiment embodiment (page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level

of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).) and the number of swine is selected from the group consisting of number of embryos, number of implanted embryos, number of embryos at a preselected time in days after pregnancy, number of weaned pigs, and number of market pigs (page 3, column 1, paragraph 2, consider the situation where the commercial producer is purchasing boars from a seedstock herd that's achieving genetic progress of .15 pigs weaned per litter each generation. The commercial unit, again operating a strict two-breed rotation, selects replacement gilts completely at random with respect to litter size weaned. The predictedresults from this situation are shown inT able 2).

22. **As per Claim 8**, *Economic Impact* discloses the method of claim 7 wherein the usage event is the number of weaned pigs having 25% or more genetics derived from the genetics transfer embodiment (page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level

of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).).

23. **As per Claim 9**, *Economic Impact* does not expressly disclose the method of claim 1 wherein the method further comprises

a. adjusting the fee responsive to an input representative of the customer's total usage of genetics obtained from the swine genetics supplier.

However, *Economic Impact* does teach paying a premium for genetically improved seedstock (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Economic Impact to include adjusting the fee responsive to an input representative of the customer's total usage of genetics obtained from the swine genetics supplier.

A person having ordinary skill in the art at the time the invention was made would have been motivated to do so in order to offset the costs of performance testing and culling incurred by the breeder as taught by *Economic Impact*.

24. **As per Claim 10**, *Economic Impact* discloses the method of claim 1 wherein the method relates to swine genetics transfer embodiments that reduce health risks for the customer's herd (page 1, column 2, paragraph 1, Using proven selection techniques, it is possible to genetically improve economically important traits at the rate of about 2 to 3% per year. Improved efficiency of pork production results not only from genetic progress, but from advances in all areas of swine production: genetics, nutrition, physiology, management, and health.).

25. **As per Claim 11**, *Economic Impact* discloses a system for implementing a method for conducting business in which a swine genetics supplier makes swine genetics available to a swine genetics customer in form of a swine genetics transfer embodiment (page 1, column 1, paragraph 4, Pork producers must exploit the power of genetic improvement programs in order to improve their production efficiency; page 2, column 1, paragraph 1, Commercial producers who obtain all their breeding stock from seedstock suppliers can genetically improve their herds) the system comprising:

a. generating a fee for use of swine genetics (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and

culling incurred by the breeder) an input representative of a usage event representative of a swine genetics customer's use of the swine genetics transfer embodiment (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder)), and

b. communicating the charge to the swine genetics customer page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder).

Economic Impact does not expressly disclose using a data processing system and a datalink for performing the method.

However, Fox teaches a swine breeding method for genetic improvement (¶1, The invention relates to the production of swine and in particular aspects to methods and systems using two or more nucleus herds for breeding and delivery of improved genetics with health to swine producers.; ¶66, The present invention is primarily described herein in terms of "the system" and its associated subsystems (e.g., sorting system, genetics improvement system, etc.) that uses a processor and a datalink to track the usage of the breeding stock (¶47, For example, phenotypic data relevant to

selected traits from at least one of SGN1 and SGN2 can be provided by a data link to a database that is data linked to a data processor for producing the measures of estimated breeding values, and then the data processor is used to access the database to produce the measures of estimated breeding values or of rate of genetic improvement).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Economic Impact with the teachings of Fox to include using a data processing system and a datalink.

A person having ordinary skill in the art at the time the invention was made would have been motivated to do so in order to save time and reduce cost associated with manually doing business.

26. **As per Claim 12**, *Economic Impact* discloses the system of claim 11 wherein the swine genetics transfer embodiment comprises an enhanced reproductive rate genetics transfer embodiment (page 1, column 3, paragraph 2, The mating of a E1 female to a sire of different breeding, for example, is expected to improve litter size about 8%).

27. **As per Claim 13**, *Economic Impact* discloses the system of claim 11 wherein the swine genetics transfer embodiment comprises a genetics transfer embodiment selected from the group consisting of semen, low-dose semen, oocytes, embryos harvested from donor sows, embryos prepared by in vitro fertilization, boars, gilts, and sows and combinations of any two or more thereof (page 1, column 3, paragraph 2, The mating of a E1 female to a sire of different breeding, for example, is expected to

improve litter size about 8%; page 2, column 1, paragraph 1, boars; see table 3 and related text, replacement gilts).

28. **As per Claim 14**, *Economic Impact* discloses the system of claim 11 wherein the system comprises:

a. generating a first fee for use of swine genetics (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder) by use of a data processing system receiving by datalink an input representative of a genetics transfer embodiment being made available to a customer;

b. generating a second fee for use of swine genetics by use of a data processing system receiving by datalink an input representative of a usage event representative of a swine genetics customer's use of the swine genetics transfer embodiment (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in

Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).); and

c. Wherein the data processor of a. and b. comprise the same or different data processors; and

d. communicating the first fee and the second fee to the swine genetics customer (page 5, column 1, paragraph 1, Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seed stock, thus offsetting the costs of performance testing and culling incurred by the breeder).

29. **As per Claim 15**, *Economic Impact* discloses the system of claim 11 wherein the system comprises a data processor:

a. tracking a plurality of genetics transfer embodiments made available to a customer (see table 3 and related text, see table 4 and related text) and;

b. Generating the first fee for each of the genetics transfer embodiments responsive to an input representative of the genetics transfer embodiment being made available to a customer (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.);

c. Wherein the first fee for each of a plurality of genetics transfer embodiments is selected from a plurality of fees according to the genetics transfer embodiment being made available (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.); and

d. Wherein the second fee for each of the plurality of genetics transfer embodiments comprises the same fee for each of the plurality of genetics transfer embodiments (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds.The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.).

30. **As per Claim 16**, *Economic Impact* discloses the system of claim 11 wherein the usage event is a number of swine produced using the genetics transfer embodiment and having greater than a preselected level of genetics derived from the genetics embodiment(page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).).

31. **As per Claim 17**, *Economic Impact* discloses the system of claim 11 wherein the usage event is a number of swine produced using the genetics transfer embodiment having greater than a preselected level of genetics derived from the genetics embodiment (page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic progress in

litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).) and the number of swine is selected from the group consisting of number of embryos, number of implanted embryos, number of embryos at a preselected time in days after pregnancy, number of weaned pigs, and number of market pigs (page 3, column 1, paragraph 2, consider the situation where the commercial producer is purchasing boars from a seedstock herd that's achieving genetic progress of .15 pigs weaned per litter each generation. The commercial unit, again operating a strict two-breed rotation, selects replacement gilts completely at random with respect to litter size weaned. The predictedresults from this situation are shown inT able 2).

32. **As per Claim 18**, *Economic Impact* discloses the system of claim 17 wherein the usage event is the number of weaned pigs having 25% or more genetics derived from the genetics transfer embodiment (page 2, column 3, paragraph 1, The relative effects of selection of replacement gilts within the commercial herd on the commercial herd's genetic merit for litter size weaned (for example) are illustrated in Tables 1 and 2. Table 1, shows that boars purchased each generation from a seedstock herd make no genetic

progress in litter size weaned. Replacement gilts are selected from the best third of the commercial two-breed rotation sow herd, based on the average of two litters. The genetic superiority of these replacement gilts is predicted to be around .25 pigs per litter. Figure 1 illustrates the dependence of the commercial herd upon the genetic level of the seedstock herds(s) supplying boars. After four generations, only 6.25% of the genetics of replacement gilts trace back to the original base herd, and this contribution,is halved every generation. Thus, even where the commercial producer retains his or her own gilts, the herd is dominated by genes from the seedstock source(s).).

33. **As per Claim 19**, *Economic Impact* does not expressly disclose the system of claim 11 wherein the system further comprises a data processor adjusting the fee responsive to an input representative of the customer's total usage of genetics obtained from the swine genetics supplier.

However, *Economic Impact* does teach paying a premium for genetically improved seedstock (page 5, column 1, paragraph 1,Commercial producers should seek out seedstock producers who are using superior performance tested sires in their herds and purchase superior performing animals from these herds. The commercial producer must, however, be willing to pay a premium for genetically improved seedstock, thus offsetting the costs of performance testing and culling incurred by the breeder.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Economic Impact to

include adjusting the fee responsive to an input representative of the customer's total usage of genetics obtained from the swine genetics supplier.

A person having ordinary skill in the art at the time the invention was made would have been motivated to do so in order to offset the costs of performance testing and culling incurred by the breeder as taught by *Economic Impact.*

34. **As per Claim 20**, *Economic Impact* discloses the method of claim 11 wherein the system relates to swine genetics transfer embodiments that reduce health risks for the customer's herd (page 1, column 2, paragraph 1, Using proven selection techniques, it is possible to genetically improve economically important traits at the rate of about 2 to 3% per year. Improved efficiency of pork production results not only from genetic progress, but from advances in all areas of swine production: genetics, nutrition, physiology, management, and health.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kellie Campbell whose telephone number is (571) 270-5495. The examiner can normally be reached on Monday through Thursday, 6:30 am to 5 pm est. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K.C.

/Alexander Kalinowski/

Supervisory Patent Examiner, Art Unit 3691